

WHAT IS CLAIMED IS:

1. An image processing apparatus for processing a plurality of color image signals input by reading of a color image on an original, the apparatus comprising:

5 conversion means for converting said plurality of
color image signals to a plurality of color signals;

first producing means for producing density distributions of plural color signals on the basis of the plurality of color signals converted by the conversion means;

discrimination means for discriminating a type of the original on the basis of the density distributions of the plural color signals produced by the first producing means;

15 first determination means for determining
a colored background on the basis of the density
distributions of the plural color signals produced by
the first producing means;

second determination means for determining whether
20 a background process is to be executed or not, on
the basis of a determination result of the first
determination means and a discrimination result of
the discrimination means;

second producing means for producing, when the
25 second determination means has determined that the
background process is to be executed, a background
process table using the density distribution values of

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Figure 1 consists of 12 histograms arranged horizontally, labeled x_1 through x_{12} . Each histogram shows the frequency of values for x_k ranging from 0 to 10. The y-axis for each histogram is labeled 'count' and ranges from 0 to 10. The distributions are roughly bell-shaped and centered around 5. The peak count increases from 10 for x_1 to 10 for x_{12} .

the plural color signals produced by the first producing means; and

density adjustment means for performing density adjustment of the plural color signals input from the conversion means, on the basis of the background process table produced by the second producing means.

2. An image processing apparatus according to claim 1, wherein said conversion means, said first producing means, said discrimination means, said first determination means and said second determination means are operated in pre-scan, and said conversion means and said density adjustment means are operated in main scan.

3. An image processing apparatus according to claim 1, wherein said conversion means converts red, green and blue image signals to cyan, magenta and yellow color signals.

4. An image processing apparatus according to claim 1, wherein said first producing means produces histogram data of each of the color signals.

5. An image processing apparatus according to claim 1, wherein said original is a character original or a photograph original, and said discrimination means discriminates an original type, i.e. whether the original is the character original or the photograph original.

6. An image processing apparatus according to

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claim 1, wherein said first determination means determines whether a colored background is left as such, in a case where the original is a color original.

5 7. An image processing apparatus according to claim 1, wherein said second determination means additionally determines color mode information, i.e. whether a color mode is a full-color mode or a black mode.

10 8. An image processing apparatus according to claim 1, wherein said second producing means produces the background process table using a minimum background elimination value calculated from the density distribution values of the color signals produced by the first producing means.

15 9. An image processing apparatus for processing a plurality of color image signals input by reading of a color image on an original, the apparatus comprising:

conversion means for converting said plurality of color image signals to a plurality of color signals;

20 first producing means for producing density distributions of plural color signals on the basis of the plurality of color signals converted by the conversion means;

25 discrimination means for discriminating a type of the original on the basis of the density distributions of the plural color signals produced by the first producing means;

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5 second determination means for determining whether
a background process is to be executed or not, on
the basis of a determination result of the first
determination means and a discrimination result of
the discrimination means;

density adjustment means for performing density
20 adjustment of the plural color signals input from the
conversion means, on the basis of the new density
adjustment table produced by the second producing
means.

10. An image processing apparatus according to
25 claim 9, wherein said second producing means prestores
a plurality of density adjustment tables corresponding
to original modes including a character original mode

11. An image forming apparatus comprising:

conversion means for converting the plural color image signals output from the image reading means to a plurality of color signals;

discrimination means for discriminating a type of the original on the basis of the density distributions of the plural color signals produced by the first producing means;

second determination means for determining whether a background process is to be executed or not, on the basis of a determination result of the first determination means and a discrimination result of the discrimination means;

second producing means for producing, when

the second determination means has determined that the background process is to be executed, a background process table using the density distribution values of the plural color signals produced by the first
5 producing means;

density adjustment means for performing density adjustment of the plural color signals input from the conversion means, on the basis of the background process table produced by the second producing
10 means; and

image forming means for forming an image on the basis of the plural color signals obtained from the density adjustment means.

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